

System And Method For Dynamically Compressing Circuit Components During Simulation

Abstract of the Disclosure

A system for dynamically compressing circuit components during simulating of a circuit having a hierarchical data structure includes a simulator module having one or more computer programs for 1) selecting a group of leaf circuits from the first and second branches for simulation, 2) if two or more leaf circuits of the circuit having a substantially same isomorphic behavior, representing the two or more leaf circuits as a merged leaf circuit, 3) creating a first port connectivity interface dynamically for the group of leaf circuits in response to the merged leaf circuit, where the first port connectivity interface communicates changes in signal conditions among the group of leaf circuits, and 4) simulating the group of leaf circuits in accordance with the first port connectivity interface. Since the system dynamically compresses two or more leaf circuits which demonstrate substantially same isomorphic behavior into a merged leaf circuit, there are less number of circuits in the dynamic database and less number of computations are performed during simulation. Therefore, the system uses less memory and achieves higher simulation performance.